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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
COLLINS, CYNTHIA E	

ART UNIT	PAPER NUMBER
1638	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/069,304	GORING ET AL.	
	Examiner	Art Unit	
	Cynthia Collins	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14,19-21,23,25 and 28* is/are pending in the application.

4a) Of the above claim(s) *28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14,19-21,23 and 25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 15 to 18, 22, 24, 26, 27, and 29 to 47 were cancelled in the preliminary amendment filed February 19, 2002.

Claims 6, 9, 14, 19, 23 and 28 were amended in the preliminary amendment filed February 19, 2002.

Claims 1-14, 19-21, 23, 25 and 28 are pending.

Election/Restrictions

Applicant's election with traverse of Group I claims (Claims 1 to 14, 19 to 21, 23, and 25), drawn to an isolated nucleic acid molecule, a vector, a host cell, and a plant, in the reply filed on October 22, 2004 is acknowledged.

The traversal is on the ground(s) that present application is a U.S. national stage filing of a PCT application and, therefore, the PCT'S unity of invention standard applies. Applicant points out that under Rule 13.4 and as advised in the MPEP at Section 1850, unity of invention is considered only in relation to "independent claims'" and not with respect to "dependent claims", and that a "dependent claim'" is defined as being a claim containing all the elements of another claim (e.g., the independent claim) and as being in the same category as that claim (e.g., being both directed to a product as opposed to one being directed to a product and another to a process). In the present case, Applicant maintains that the Group II claim (Claim 28) is dependent from Claim 1 (a Group I claim) and is of the same category as Claim I (a product claim), and that accordingly the claims of Group I and II share unity of invention.

This is not found persuasive because the product of claim 1, a nucleic acid molecule, and the product of claim 28, a polypeptide, are different categories of products. Nucleic acid molecules and polypeptides do not share unity of invention because they do not have a common structure and therefore are not linked by a special technical feature.

The requirement is still deemed proper and is therefore made FINAL. Claim 28 is withdrawn from consideration as being directed to a nonelected invention. Claims 1-14, 19-21, 23 and 25 are examined herein.

Information Disclosure Statement

An initialed and dated copy of Applicant's IDS form 1449, filed March 26, 2003 is attached to the instant Office action.

Claim Objections

Claim 8 is objected to because of the following informalities: the word "polypeptide" is misspelled in line 2 of part (c). Appropriate correction is required.

Claim 8 is objected to for failing to comply with 37 CFR 1.821(d), in that the amino acid sequence encoded by the nucleotide sequence of (a) is not refereed to by the use of a sequence identifier preceded by "SEQ ID NO:" in the text of the claims. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9, 12-14, 19-21, 23 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims are drawn to an isolated nucleic acid molecule encoding a proline-rich, extensin-like receptor kinase (PERK) polypeptide or a PERK polypeptide having PERK activity, including an isolated nucleic acid molecule encoding a PERK 1 polypeptide, including all or part of a nucleotide sequence shown in SEQ ID NO:1, including a nucleic acid molecule selected from the group consisting of: (a) a nucleic acid molecule that hybridizes to a nucleic acid molecule consisting of SEQ ID NO:1 or a complement thereof under low, moderate or high stringency hybridization conditions wherein the nucleic acid molecule encodes a PERK polypeptide or a polypeptide having PERK activity; and (b) a nucleic acid molecule degenerate with respect to (a), wherein the nucleic molecule encodes a PERK polypeptide or a polypeptide having PERK activity, and including a nucleic acid molecule selected from the group consisting of: (a) the nucleic acid molecule of the coding strand shown in SEQ ID NO:1 or a complement thereof; (b) a nucleic acid molecule encoding the same amino acid sequence as a nucleotide sequence of (a); and (c) a nucleic acid molecule having at least 17% identity with the nucleotide sequence of (a) and which encodes a PERK polypeptide or a polypeptide having PERK activity. The claims are also drawn to a vector, a host cell and a plant comprising said isolated nucleic

acid molecule. The claims are additionally drawn to a PERK1 nucleic acid isolated from *Brassica* or a fragment thereof.

The specification describes a single 2189 base pair full length cDNA sequence of SEQ ID NO:1 designated PERK1 (Proline-rich Extensin-like Receptor Kinase 1), which was obtained from a *Brassica napus* pistil cDNA library using primers designed against the conserved kinase subdomains I and VII of receptor-like protein kinases, wherein said sequence consists of one large open reading frame of 1944 bp encoding a 648 amino acid protein of SEQ ID NO:2 (page 38 line 20 - page 39 line 6). The specification also describes PERK1 as defining a new class of plant receptor kinases characterized by an extracellular domain rich in proline sharing sequence similarity to the extensin family of cell wall proteins (page 3 lines 10-16).

The specification does not describe functional fragments or variants of SEQ ID NO:2. The specification does not describe other nucleic acid molecules obtained from other sources that encode a PERK polypeptide or a polypeptide having PERK activity, such as nucleic acid molecules that that hybridize to a nucleic acid molecule consisting of all or part of SEQ ID NO:1 or a complement thereof under low, moderate or high stringency hybridization conditions, or isolated nucleic acid molecules having at least 17 % identity with SEQ ID NO:1. The specification also does not describe the structural features characteristic of PERK sequences that are correlated with PERK activity. The specification further does not describe PERK1 nucleic acids other than SEQ ID NO:1 that were isolated from *Brassica* species

The Federal Circuit has recently clarified the application of the written description requirement. The court stated that "A description of a genus of cDNAs may be achieved by means of recitation of a representative number of cDNAs, defined by nucleotide sequence,

falling within the scope of the genus or of a recitation of structural features common to members of the genus, which features constitute a substantial portion of the genus." See *University of California v. Eli Lilly and Co.*, 119 F.3d 1559, 1569; 43 USPQ2d 1398, 1406 (Fed. Cir. 1997).

In the instant case Applicant has not described a representative number of species falling within the scope of the claimed genus that encompasses isolated nucleic acid molecules that encode any PERK polypeptide of unspecified structure obtained from any unspecified source, or any polypeptide of unspecified structure obtained from any unspecified source having PERK activity, nor the structural features unique to the genus. Applicant also has not described a representative number of species falling within the scope of the claimed genus that encompasses isolated nucleic acid molecules that hybridize to a nucleic acid molecule consisting of all or any unspecified part of SEQ ID NO:1 or a complement thereof under low, moderate or high stringency hybridization conditions, nor the structural features unique to the genus. Applicant additionally has not described a representative number of species falling within the scope of the claimed genus that encompasses isolated nucleic acid molecules having at least 17 % identity with SEQ ID NO:1, nor the structural features unique to the genus. Applicant further has not described a representative number of species falling within the scope of the claimed genus that encompasses PERK1 nucleic acids other than SEQ ID NO:1 that were isolated from *Brassica* species, nor the structural features unique to the genus.

Claims 1-10, 12-14, 19-21, 23 and 25 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an isolated nucleic acid molecule of SEQ ID NO:1 or encoding SEQ ID NO:2, does not reasonably provide enablement for other isolated

nucleic acid molecules encoding functional fragments or variants of SEQ ID NO:2. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

The claims are broadly drawn to an isolated nucleic acid molecule of unspecified structure encoding a proline-rich, extensin-like receptor kinase (PERK) polypeptide of unspecified structure or a PERK polypeptide of unspecified structure having PERK activity, including an isolated nucleic acid molecule encoding a PERK 1 polypeptide, including all or part of a nucleotide sequence shown in SEQ ID NO:1, including a nucleic acid molecule selected from the group consisting of: (a) a nucleic acid molecule that hybridizes to a nucleic acid molecule consisting of SEQ ID NO:1 or a complement thereof under low, moderate or high stringency hybridization conditions wherein the nucleic acid molecule encodes a PERK polypeptide or a polypeptide having PERK activity; and (b) a nucleic acid molecule degenerate with respect to (a), wherein the nucleic molecule encodes a PERK polypeptide or a polypeptide having PERK activity, and including a nucleic acid molecule selected from the group consisting of: (a) the nucleic acid molecule of the coding strand shown in SEQ ID NO:1 or a complement thereof; (b) a nucleic acid molecule encoding the same amino acid sequence as a nucleotide sequence of (a); and (c) a nucleic acid molecule having at least 17% identity with the nucleotide sequence of (a) and which encodes a PERK polypeptide or a polypeptide having PERK activity. The claims are also drawn to a vector, a host cell and a plant comprising said isolated nucleic acid molecule. The claims are additionally drawn to a PERK1 nucleic acid of unspecified structure and function isolated from *Brassica* or a fragment thereof.

The specification discloses the cloning of a single 2189 base pair full length cDNA sequence of SEQ ID NO:1 designated PERK1 (Proline-rich Extensin-like Receptor Kinase 1), which was obtained from a *Brassica napus* pistil cDNA library using primers designed against the conserved kinase subdomains I and VII of receptor-like protein kinases, wherein said sequence consists of one large open reading frame of 1944 bp encoding a 648 amino acid protein of SEQ ID NO:2 (page 38 line 20 - page 39 line 6). The specification also discloses that the deduced amino acid sequence of PERK1 shows that it is a transmembrane receptor kinase with a distinct extracellular, transmembrane and cytoplasmic domain (Figure 1), and that the extracellular domain of PERKI shows sequence similarity to plant cell wall proline-rich proteins and extensins which comprise a family of hydroxproline-rich glycoproteins (page 16 lines 11-19). The specification additionally discloses that PERK1 defines a new class of plant receptor kinases (page 3 lines 10-15), and that the catalytic domain of PERKI possesses all of the invariant residues necessary for kinase activity (page 16 lines 29-30). The specification further discloses that a recombinant catalytic domain fusion protein of PERK1 expressed in E. coli exhibits serine/threonine kinase activity (Figure 9; page 35 line 25 - page 36 line 19). The specification does not disclose the identification, cloning or use of other nucleic acid molecules encoding other polypeptides having the characteristics of the *Brassica napus* PERK1 polypeptide.

The full scope of the claimed invention is not enabled because isolated nucleic acid molecules encoding functional fragments of PERK polypeptides and isolated nucleic acid molecules encoding PERK polypeptides from sources other than *Brassica napus* plants cannot be

predictably obtained on the basis of structure, as receptor-like protein kinases are functionally diverse.

The specification discloses that the *Brassica napus* PERK1 polypeptide is a receptor-like protein kinase, which proteins are known to exhibit diversity with respect to their specific functions in plants, such that a PERK polypeptide could not be predictably selected on the basis of its identity as a receptor-like protein kinase alone. Applicant's own specification makes note of this diversity. For example, at page 1 lines 22-27 it is disclosed that "members of the RLK family share highly homologous catalytic domains with consensus sequences indicative of serine/threonine autophosphorylation activity, yet the extracellular domains of these receptors are very divergent (Braun and Walker, 1996). Five different classes of plant receptor-like protein kinases have therefore been identified according to amino acid sequence similarity in the extracellular domains of these genes."

The prior art further teaches that even plant RLKs that share the same characteristic amino acid sequence motifs in their extracellular domains can differ in function. For example, Song W. et al. (A receptor kinase-like protein encoded by the rice disease resistance gene, Xa21. Science. 1995 Dec 15;270(5243):1804-6, Applicant's IDS) teach that the rice disease resistance gene Xa21 encodes a receptor-like protein kinase having an extracellular domain comprising a leucine rich repeat, which receptor-like protein kinase confers resistance to *Xanthomonas oryzae* pv. oryzae race 6. Alternatively Clark S. et al. (The CLAVATA1 Gene Encodes a Putative Receptor Kinase That Controls Shoot and Floral Meristem Size in *Arabidopsis*. Cell, 1997 May 16; 89(4): 575-85, Applicant's IDS) teach that the *Arabidopsis CLAVATA* gene encodes a

receptor-like protein kinase having an extracellular domain comprising a leucine rich repeat, which receptor-like protein kinase functions to controls shoot and floral meristem size.

In the instant case the specification does not provide sufficient guidance with respect to where and how to obtain other isolated nucleic acid molecules encoding functional fragments of PERK polypeptides or encoding PERK polypeptides obtained from sources other than *Brassica napus* plants. Absent such guidance one skilled in the art would have to identify and clone from undisclosed sources sequences encoding polypeptides having homology to the *Brassica napus* PERK1 polypeptide, and then test each of the myriad sequences encompassed by the claims for function in order to discriminate between those sequences that have PERK activity and those that do not. Such a trial and error approach to practicing the claimed invention would constitute undue experimentation.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1, and claims dependent thereon, is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is indefinite in the recitation of "proline-rich, extensin-like". It is unclear how much proline a proline-rich, extensin-like receptor kinase (PERK) polypeptide would comprise in order to be "proline-rich", as neither the specification nor the prior art define "proline-rich" with respect to receptor kinase polypeptides. It is also unclear in what way a proline-rich, extensin-like receptor kinase (PERK) polypeptide is "like" an extensin, as polypeptides may be like one another with respect to one or more

attributes, e.g. structurally in whole or part, functionally in whole or part, chemically in whole or part, in terms of conditions under which they are expressed, etc.

Claims 1, 6 and 8, and claims dependent thereon, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1, 6 and 8 are indefinite in the recitation of "PERK activity". It is unclear what type of activity the polypeptides have, as neither the specification nor the prior art define what constitutes "PERK activity".

Claim 2, and claims dependent thereon, is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 is indefinite in the recitation of "associated with". It is unclear what type of association exists between the cell wall and the extensin-like extracellular domain, since polypeptides may associate with subcellular structures in more than one way, e.g. directly, indirectly, covalently, noncovalently, etc.

Claim 2, and claims dependent thereon, is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 is indefinite in the recitation of "involved in the transduction of extracellular stimuli into a intracellular response". It is unclear in what way the cell wall and the extensin-like extracellular domain are involved in the transduction of extracellular stimuli into a intracellular response, since polypeptides and subcellular structures may participate in the transduction of different types of extracellular stimuli, and may transduce those stimuli into different types of intracellular responses.

Claim 3, and claim 5 dependent thereon, is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 is indefinite in the recitation of "the extracellular stimuli". There is insufficient antecedent basis in claim 1 for the limitation "the extracellular stimuli" recited in claim 3.

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 4 is indefinite in the recitation of "the wounding". There is insufficient antecedent basis in claim 1 for the limitation "the wounding" recited in claim 4.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 6 is indefinite in the recitation of "low, moderate, and high stringency conditions". It is unclear what type of hybridization conditions would yield the claimed nucleic acid molecules since those skilled in the art define low, moderate, and high stringency conditions differently.

Claims 6, 8, 10 and 11, and claims dependent thereon, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 6, 8, 10 and 11 are indefinite in the use of brackets. It is unclear whether or not the bracketed material is intended to limit the claims. It is suggested that either the brackets or the bracketed material be deleted in order to overcome the rejection.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 6 is indefinite in the recitation of "the nucleic acid molecule of claim 2 wherein the hybridization conditions". There is insufficient antecedent basis in claim 2 for the limitation "the hybridization conditions" recited in claim 7.

Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 21 is indefinite in the recitation of "the recombinant nucleic acid molecule of claim 1". There is insufficient antecedent basis in claim 1 for the limitation "the recombinant nucleic acid molecule" recited in claim 21.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 21 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 21, as written, does not sufficiently distinguish over cells as they exist naturally, because the claim does not particularly point out any non-naturally occurring products. Claim 21 is drawn to progeny of a host cell comprising the recombinant nucleic acid of claim 1 or the vector of claim 19 , but is not limited to host cell progeny that comprise the recombinant nucleic acid or the vector. Parental host cells do not necessarily transmit recombinant nucleic acids or vectors to their progeny, and there is no indication that the claimed host cell progeny exhibit any

other distinguishable characteristics, such that the claimed host cell progeny are not distinguishable from cells that occur in nature. In the absence of the hand of man, the naturally occurring products are considered non-statutory subject matter. See Diamond v. Chakrabarty, 447 U.S. 303, 206 USPQ 193 (1980). The claims should be amended to indicate the hand of the inventor, e.g., by indicating that the host cell progeny comprise the recombinant nucleic acid or the vector. See MPEP 2105.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-10, 12-14, 19-21, 23and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Chory et al. (US Patent No. 6,245,969, filed June 24, 1997 and issued June 12, 2001).

The claims are drawn to an isolated nucleic acid molecule encoding a proline-rich, extensin-like receptor kinase (PERK) polypeptide or a PERK polypeptide having PERK activity, including an isolated nucleic acid molecule encoding a PERK 1 polypeptide, including all or part of a nucleotide sequence shown in SEQ ID NO:1, including a nucleic acid molecule selected from the group consisting of: (a) a nucleic acid molecule that hybridizes to a nucleic acid molecule consisting of SEQ ID NO:1 or a complement thereof under low, moderate or high

stringency hybridization conditions wherein the nucleic acid molecule encodes a PERK polypeptide or a polypeptide having PERK activity; and (b) a nucleic acid molecule degenerate with respect to (a), wherein the nucleic molecule encodes a PERK polypeptide or a polypeptide having PERK activity, and including a nucleic acid molecule selected from the group consisting of: (a) the nucleic acid molecule of the coding strand shown in SEQ ID NO:1 or a complement thereof; (b) a nucleic acid molecule encoding the same amino acid sequence as a nucleotide sequence of (a); and (c) a nucleic acid molecule having at least 17% identity with the nucleotide sequence of (a) and which encodes a PERK polypeptide or a polypeptide having PERK activity. The claims are also drawn to a vector, a host cell and a plant comprising said isolated nucleic acid molecule. The claims are additionally drawn to a PERK1 nucleic acid isolated from *Brassica* or a fragment thereof.

Chory et al. teach an isolated a nucleic acid molecule (Chory's SEQ ID NO:1) isolated from Arabidopsis that encodes a serine/threonine protein kinase, and a host cell and plant comprising said isolated nucleic acid molecule (Figure 1; column 27 line 35 through column 28 line 35; column 41 through column 44). The isolated nucleic acid molecule corresponding to Chory's SEQ ID NO:1 has at least 17 % identity with Applicant's SEQ ID NO:1, as Chory's SEQ ID NO:1 and Applicant's SEQ ID NO:1 have a best local similarity of 55.4% (see attached sequence alignment). Chory's SEQ ID NO:1 accordingly would also hybridize to a nucleic acid molecule consisting of all or part of Applicant's SEQ ID NO:1 or a complement thereof under low, moderate or high stringency hybridization conditions. The isolated nucleic acid molecule corresponding to Chory's SEQ ID NO:1 encodes a PERK polypeptide having PERK activity or a PERK1 polypeptide because, like Applicant's SEQ ID NO:1, it encodes a serine/threonine

protein kinase. While the isolated nucleic acid molecule corresponding to Chory's SEQ ID NO:1 was not obtained from Brassica, the isolated nucleic acid molecule need not obtained from Brassica to anticipate the rejected claims, because the source of the isolated nucleic acid molecule corresponding to Chory's SEQ ID NO:1 does not distinguish that isolated nucleic acid molecule from the claimed nucleic acid molecule. See In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985), which teaches that a product-by-process claim may be properly rejectable over prior art teaching the same product produced by a different process, if the process of making the product fails to distinguish the two products.

Remarks

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Collins whose telephone number is (571) 272-0794. The examiner can normally be reached on Monday-Friday 8:45 AM -5:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on (571) 272-0804. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cynthia Collins
Examiner
Art Unit 1638

CC

Cynthia Collins 12/09/04